APPENDIX

Environmental • Geotechnical • Special Inspections • Materials Testing

TERRASEARCH INC.

SERVING NORTHERN CALIFORNIA SINCE 1969

Project No. 9993.G
2 May 2007

Ms. Emily Chen
21009 Stevens Springs Parkway
Cupertino, Ca 95014

Subject: Proposed New Development
Santa Clara Square
Halford Avenue
Santa Clara, California

Reference: Geotechnical Investigation
Prepared by ***Terrasearch, Inc.,***
Dated 6 October 2003

Dear Ms. Chen:

At your request, we reviewed the above referenced report for the purpose of evaluating the site conditions from a geotechnical point of view for the construction of the proposed new structures.

It is our understanding that the new development plan will incorporate an eight (8) story structure. A review of the exploration borings drilled for the previous investigation indicates that the site is underlain at depth by stiff silty clays and dense clayey silts to the explored depth of 50 feet.

It is therefore our opinion that the referenced report is still applicable for the proposed development. It is also noted that an update with supplemental recommendation will be provided at the design phase of the project for the proposed new construction

Should you have any questions, or should require additional information, please contact the office at your convenience.

Very truly yours,
Terrasearch, Inc.,

REGISTERED PROFESSIONAL ENGINEER
GEORGE MAKDISSY
No. 54348
Exp. 12/31/07
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HEXAGON TRANSPORTATION CONSULTANTS, INC.

MEMORANDUM

TO: Sayed Fakhry & Dave Pitton, City of Santa Clara
CC: Richard Mindigo, Mindigo & Associates

FROM: Robert Del Rio

DATE: April 26, 2007

SUBJECT: Santa Clara Square (April 2005) Traffic Count Validity

The traffic study for Santa Clara Square was begun in September 2003. The initial study was completed in April 2004 and is based on traffic counts collected in 2002-2003. The report was later revised to account for a change in project description in April 2005. At the time of the revision, the need to update traffic counts used in the analysis was discussed with Dave Pitton. Both he and Hexagon agreed that traffic volumes at that time had been decreasing and it would not be worthwhile to collect new counts. Therefore, the April 2005 report is also based on 2002-2003 counts.

The question of the validity of the 2002-2003 counts has been raised again. To evaluate the validity of traffic counts used in the analysis, recent traffic counts at study intersections must be obtained. The CMP Monitoring Program collects traffic counts at its facilities typically on a yearly basis. There are recent intersection counts available at CMP intersections within the City of Santa Clara and can serve as a tool to evaluate any trends in counts between 2002 and 2006. The CMP did not collect counts in 2003 and 2005 and not all counts collected in 2006 are available. The attached Table 1 presents traffic count comparisons at those CMP intersections for which 2006 counts are available. When comparing the 2004 and 2006 counts to those from 2002 used in the study it is evident that traffic volumes have decreased since 2002.

The CMP Monitoring Program has not released its 2006 Monitoring Report. Therefore, the latest officially approved counts for CMP intersections are from 2004. As an alternate tool to evaluate the validity of the 2002-2003 counts used in the April 2005 TIA, the CMP study intersections where reevaluated using the 2004 counts. As shown in Table 1 the results show that there would be no change in the overall results of the April 2005 TIA using the more recent 2004 counts.

Based on the data gathered and reanalysis of level of service for CMP intersections located within the City of Santa Clara, it appears that the 2002-2003 traffic counts used in the April 2005 Santa Clara Square traffic study represent a peak in traffic volumes prior to the downturn of the economy.

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Table 1
Santa Clara Square Intersection Turn-Movement Comparison

	Year 2002		Year 2004			Year 2006		
	Count Date	Total Volume	Count Date	Total Volume	% Increase[1]	Count Date	Total Volume	% Increase[1]
El Camino Real and Halford Avenue			03/19/02	2,316		03/07/06	2,153	
El Camino Real and Monroe Street	10/23/02	3,077	09/15/04	2,554	-17.0%	09/19/06	2,769	-10.0%
El Camino Real and Lawrence Expressway	10/23/02	5,464	09/14/04	4,039	-26.1%	09/21/06	4,949	-9.4%
I-280 SB and Stevens Creek Boulevard	10/30/02	4,327	09/16/04	3,915	-9.5%	09/20/06	4,036	-6.7%
Lawrence Expressway and Stevens Creek Blvd. (East)	10/30/02	4,633	09/16/04	5,309	14.6%	09/20/06	4,474	-3.4%
Lawrence Expressway and Stevens Creek Blvd. (West)	10/30/02	3,772	09/16/04	3,646	-3.3%	09/21/06	3,549	-5.9%

Notes:
1. Percent increase based on comparison to Year 2002 count.

Table 2
Santa Clara Square CMP Intersection Levels of Service Summary (2002 vs. 2004 Counts)

Study Number		Count Date	Existing		Background		Project Conditions			
			Ave. Delay	LOS	Ave. Delay	LOS	Ave. Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
2	El Camino Real and Lawrence Expressway*	10/23/02	31.8	C	38.8	D	40.3	D	0.0	0.021
		09/14/04	34.7	C	47.8	D	52.9	D	11.2	0.042
7	El Camino Real and Bowers Avenue*	10/31/02	44.9	D	48.8	D	49.4	D	0.9	0.007
		09/14/04	47.1	D	54.4	D	55.9	E	2.8	0.010
8	Lawrence Expressway and Scott Boulevard*	10/03/02	67.6	E	70.7	E	70.9	E	0.4	0.007
		09/15/04	65.9	E	71.0	E	71.8	E	1.4	0.007
10	Lawrence Expressway and Monroe Street*	10/08/02	38.5	D	42.2	D	43.3	D	1.8	0.011
		09/16/04	38.0	D	39.6	D	40.0	D	0.8	0.010
14	Lawrence Expressway and Homestead Road*	10/03/02	54.1	D	137.4	F	137.3	F	0.7	0.005
		10/12/04	54.3	D	136.1	F	136.3	F	1.0	0.005
17	Lawrence Expressway and I-280*	10/08/02	39.8	D	56.7	E	57.7	E	1.5	0.004
		09/29/04	39.2	D	57.5	E	58.8	E	1.5	0.004

* Denotes CMP intersection

6.6.6 Sanitary Sewer

The Sewer Utility is responsible for the inspection, operation and maintenance of the sanitary sewage collection system. The Utility also performs minor construction work and cleanout installation. The system in 1989 consisted of 261 miles of collector and transmission mains; 22,000 sewer lateral connections; 4890 manholes; 16 siphons; five lift stations and two pump stations. In 1988, the system collected and treated approximately 7.2 billion gallons of sewage. As of July 2006, the system has been expanded to include an additional 16 miles of sewer line (277 miles total); an additional 2, 400 sewer lateral connections and a new pumping station.

The San Jose/Santa Clara Water Pollution Control Plant near Alviso is a regional wastewater treatment facility serving eight tributary sewage collection agencies. The Water Pollution Control Plant is administered and operated by the City of San Jose's Department of Water Pollution Control. In 1989, the City of Santa Clara's share of the treatment plant capacity was 26.4 million gallons per day (MGD). It is anticipated that in 1993 the City's flow may reach 23.6 MGD, leaving a reserve capacity of 2.8 MGD. By 2005, the flow is expected to reach 25.8 MGD. The City of Santa Clara's projected growth from 1990 to 2005 will increase the average daily flow by 2.16 MGD and increase the peak flow by 5.4 MGD.

Based on 1989 flow measurements and more current 2007 hydraulic modeling data[1], the large interceptor mains and pump stations that convey Santa Clara's sewage to the treatment plant have adequate capacity for existing sewage flow. However, based on hydraulic modeling of the system, several sewer mains and collector lines are at or near capacity, and will suffer from capacity deficiencies to accommodate the increased wastewater flows generated from projects within the City that are contemplated by the current General Plan and that could be constructed through the years 2010 and beyond. These projected capacity deficiencies are based on the anticipated increased sanitary sewer flows resulting from the cumulative development and redevelopment projects and increased densities in mixed-use and transit-oriented areas that are consistent with and included as part of projected growth anticipated under this General Plan, but that may occur in years 2007 and beyond. The majority of deficiencies are projected to occur on the western side of the City along the 27-inch through 36-inch trunk sewer in Great America Parkway and Bowers Avenue and extending upstream into the smaller trunk sewers in Chromite Drive, Machado Avenue, Calabazas Boulevard and El Camino Real. The deficiencies are also attributable to the City's commitment to provide a defined volume of conveyance capacity for a portion of the City of Cupertino, based upon a contractual agreement when the City of Santa Clara purchased and existing sewer trunk line from the Cupertino Sanitation District some years ago. There are also some areas of predicted capacity deficiencies in the southeast portion of the City in Scott Boulevard and Park Avenue.

As such, new development projects that contribute sewer flows to those portions of the sewer collection system projected to have deficiencies may require selected improvements. The hydraulic modeling study completed by the City in 2007 includes recommended solutions to these capacity deficiencies. These solutions have been used to estimate capital improvement

[1] RMC Water and Environment, Sanitary Sewer Capacity Assessment Draft Report prepared for the City of Santa Clara, dated May 2007

costs, which can be factored into the City's Capital Improvement Program and associated fee structure.

The evaluation of impacts upon the smaller collector mains will continue to depend on the location and type of development. Sewer mains near or adjacent to other large undeveloped or redevelopable parcels may have adequate capacity to accommodate most types of development on those sites; however, the type of development can radically impact reserve capacity within the conveyance system. The City's experience is that certain types of industry, e.g., printed circuit board manufacture and wafer fabrication, discharge very high volumes of wastewater in relation to their floor area - as much as 6 to 10 times more than most other commercial and industrial uses. It is a City requirement that new industrial, commercial and major residential development be reviewed to determine projected wastewater load and available sewer capacity before zoning approval or permits are granted. To the extent that additional sewer collection system improvements may be identified, such improvements will become the responsibility, in whole or in part, of those developing properties.

Cost of sewer service will escalate because of increasingly strict federal and state regulatory requirements on sewage treatment and disposal. Notwithstanding, the Sewer Utility will continue to establish fair and equitable fees, rates and charges to provide revenue sufficient to maintain the fiscal integrity of the utility.